

**REVIEW COMMENTS**  
**SUPPORT PLANS FOR THE ENGINEERING EVALUATION/COST ANALYSIS**  
**WORK PLAN FOR THE AVERY LANDING SITE**

**14 April 2009**

**Attachment A - Treatability Study Work Plan**

1. Page 2, Section 1.2, 5<sup>th</sup> paragraph. The analytical results from the various soil fractions and residuals resulting from soil washing will be compared to: EPA Removal Action Level Guidelines; EPA Regional Screening Levels; the Idaho Risk Evaluation Manual concentrations for soil; the NOAA Screening Quick Reference Tables, Freshwater Sediment Criteria (Buchman 2008); and the Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald 2000).
2. Page 3, Section 2.1. Clarify that the soil treatability samples will be collected from the six (6) "Test Pits for Soil Sampling" shown on Figure 2 (Treatability Study Sampling Locations).
3. Page 3, Section 2.2. Clarify the goal for preparing three composite samples. For example, are the composite samples intended to represent different target levels of contamination such as low, medium, and high, or are they intended to represent a random or average amount of contamination?
4. Page 3, Section 2.3.2. Three products will be generated; however, Figure 3 lists as many as nine samples (A through I). All samples indicated on Figure 3 should be addressed in the text. Also, the samples discussed in this section should include the sample ID used in Figure 3 as a cross-reference.
5. Page 3, Section 2.3.2. Revise this section to match the process outlined in Figure 3. For example, there is no mention in the text of the #10 mesh dry screening step (Sample B to C).
6. Page 4, Section 2.4. In addition to photographs before and after soil washing, required documentation must include documentation of laboratory observations.
7. Page 4, Section 1.2, 1<sup>st</sup> paragraph. The scope of laboratory analyses must be expanded to include chemical analysis for soil washing rinsate.
8. Page 4, Section 1.2, 1<sup>st</sup> paragraph. The scope of laboratory analyses must also be expanded to include collection and analysis of a "confirmational" soil fraction sample, and this sample must be subject to VOCs, SVOCs, metals, PCBs, NWPTH-Dx, and TAL metals.

9. Page 5, Section 3.0, 3<sup>rd</sup> paragraph. The report must include a discussion of analytical results compared against the potential ARARs and TBC materials identified in Comment No. 1.
10. Figure 3. Clarify why Sample B requires crushing for analysis, but Samples A and C do not.
11. Figure 3: The composite (untreated) samples must also be analyzed for the parameters of concern (M, PS, A, L, etc.).

### **Attachment B - Field Sampling and Analysis Project Plan**

12. Section 2.0. Revise to incorporate by reference the Treatability Study Work Plan.
13. Page B-4, Section 3.1.1, 1<sup>st</sup> paragraph. Clarify why the proposed boreholes for soil sampling are situated only in vicinity of the former 500,000 gallon fuel oil tank, as opposed to including other areas such as the former boiler house and machine shop.
14. Page B-4, Section 3.1.1, 1<sup>st</sup> paragraph. Revise to note that soil samples will be obtained by excavating “until groundwater is observed,” which is expected to occur at a depth of approximately 10 to 12 feet below ground surface.
15. Page B-4, Section 3.1.1., 1<sup>st</sup> paragraph. Clarify whether the drilling technique is air rotary or air rotary casing hammer (ARCH). (See also comment recommending hollow stem auger below.)
16. Page B-5, Section 3.1.1.1, 1<sup>st</sup> bullet. Describe what, if any, additional permitting and/or clearance requirements are associated with the boreholes to be drilled beneath Highway 50.
17. Page B-5, Section 3.1.1.1, 2<sup>nd</sup> bullet. Describe what, if any, additional locating activities will be performed outside of public rights-of-way.
18. Page B-5, Section 3.1.1.2. The number of soil samples must be revised to allow for the possibility of multiple contaminated soil horizons (e.g., 3 to 5 soil samples dependent on the presence of contaminated soil horizons).
19. Page B-5, Section 3.1.1.2. Clarify whether soil samples will be collected with a lined split-spoon sampler, and whether the soil samples collected at 5-foot intervals will be submitted for laboratory analysis.

20. Page B-5, Section 3.1.1.2. Soils must also be classified for color using a Munsell soil color chart.
21. Page B-5, Section 3.1.1.3, 1<sup>st</sup> paragraph. The additional field screening methods must also include sheen testing.
22. Page B-5, Section 3.1.1.3, 2<sup>nd</sup> and 4<sup>th</sup> paragraphs. A major purpose of this field sampling activity is to investigate the western portion of the Site. Given that no information exists for this portion, it is inappropriate to assume a limited list of analytes. Thus, the test pit soil samples must be evaluated for VOCs, SVOCs, PCBs, NWTPH-Dx, and TAL metals.
23. Page B-5, Section 3.1.1.3, 2<sup>nd</sup> paragraph, 2<sup>nd</sup> bullet. Clarify whether cPAHs or PAHs be analyzed for.
24. Page B-5, Section 3.1.1.3, 4<sup>th</sup> paragraph. EPA detected PCBs in the product sample in HC-4 and in subsurface soil samples. Thus, PCBs must also be analyzed for in subsurface soils.
25. Page B-6, Section 3.1.1.5. Clarify the following statement: "If boreholes are required to collect soil samples, then the boreholes will be backfilled by a certified drilling contractor with concrete. The boreholes will also be marked with a flush-mount steel plate as described above." Previously in the same paragraph, it states boreholes will be backfilled with bentonite and bentonite grout. Clarify why will concrete be used for boreholes with soil samples? Also, clarify whether soil samples will be collected from all boreholes.
26. Page B-6, Section 3.1.1.6. Clarify why this section states that Golder field personnel will survey boreholes and test pit locations, whereas Section 3.2.1.9 states that a certified surveyor will survey the MWs (i.e., why not use the certified surveyor to survey all locations?).
27. Page B-7, Section 3.2, 1<sup>st</sup> paragraph. An air-rotary casing hammer will likely mobilize any LNAPL and create a pressure differential in an area of influence around the borehole as the air medium will affect the subsurface, which may bias future water sampling. Thus, clarify why the groundwater monitoring wells will be installed using air-rotary drilling techniques, as opposed to using a hollow stem auger drilling rig or a reverse circulation drilling rig
28. Page B-7, Section 3.2, 2<sup>nd</sup> paragraph. Provide additional details references, or supporting data for the following statement: "The groundwater is flowing parallel to the river within the eastern portion of the Site (Section 15 Area). The groundwater flow pattern is also influenced from groundwater flowing southward from the mountainside. The Site groundwater appears to change direction and flow toward the southwest and toward the St. Joe River from commingling with mountainside groundwater in the middle portion of the Site (in

the area around well HC-4 and around the boundary between Section 15 and 16 Areas).”

29. Page B-8, Section 3.2.1.2, 2<sup>nd</sup> paragraph. Clarify why MW GA-1 will be the first drilled and installed well, given that this well is most likely to be in a contaminated area.

30. Page B-9, Section 3.2.1.5, 2<sup>nd</sup> paragraph, 5<sup>th</sup> sentence. Revise this sentence to note that screen depth will also depend on seasonal groundwater fluctuations and the groundwater conditions when the wells are installed, to ensure that the screen is installed at appropriate levels.

31. Page B-10, Section 3.2.1.5. Clarify whether the filter pack installation includes swabbing with a surge block.

32. Page B-10, Section 3.2.1.8. Clarify whether using drop tubes will interfere with the ability to get accurate product levels or thicknesses in the wells. In addition, clarify whether the drop tube be used for only the first sampling event or be maintained as a permanent well feature.

33. Page B-12, Section 3.2.2. All new and existing monitoring wells and piezometers must be investigated for LNAPL, and the resulting data must be reported to EPA prior to soil boring and MW installation. If the data indicates that the LNAPL plume has changed since the last investigation, then the locations of the proposed soil borings and MWs will be re-evaluated. Furthermore, any subsequent MW sampling event must also include an investigation of all wells and piezometers (whether to be sampled or not) for the presence and thickness of LNAPL and for groundwater elevations.

34. Page B-12, Section 3.2.2.2. Clarify why floating LNAPL will be collected from only MW-11 and HC-4, as opposed to all wells and piezometers where free product is detected during the LNAPL survey.

35. Page B-13, Section 3.2.2.1. Clarify whether there are any special considerations or procedures to determine product levels in wells that contain the drop tube.

36. Page B-13, Section 3.2.2.1. Clarify what alternative procedure will be used to sample groundwater if the LNAPL proves to be too thick for use of a peristaltic pump.

37. Page B-14, Section 3.2.2.4. Clarify why PCBs will be analyzed only at specific wells, as opposed to all wells.

38. Page B-14, Section 3.2.2.4 (and other sections). The metals must be revised to include aluminum, iron, and manganese.

39. Page B-14, Section 3.2.3. Clarify which wells will be included in hydraulic gradient investigation.
40. Page B-14, Section 3.2.3. Clarify whether the groundwater levels in those wells that contain LNAPL will be adjusted for the presence of the LNAPL, and if yes, what the correction factor will be.
41. Page b-15, Section 3.3. Clarify whether there are any specific plans to evaluate the depth and extent of the petroleum smear zone, especially near the bank of the river?
42. Page B-16, Section 3.3.1.1: Clarify the sediment sampling method and how it will be performed 3 to 4 feet from the river bank.
43. Page B-14, Section 3.3.1.4: Clarify why metals analyses will be performed on only LNAPL samples, and why a filtered water sample will be collected from each surface water location.
44. Page B-21, Section 4.5. Clarify why drilling equipment will not be decontaminated using hot steam, along with detergent and water.

#### **Appendix A – Quality Assurance Project Plan**

45. Page 5, Section 3.1. Clarify why NWTPH-HCID is included in this section, but not mentioned in the SAP.
46. Page 5, Section 3.1. Clarify whether the PAHs include all typical PAHs, or just the carcinogenic PAHs.
47. Page 5, Section 3.1, third paragraph. Revise to include a discussion of EPA test methods for PCBs.
48. Page 12, Section 6.1. Revise to include delivery of CLP-equivalent data deliverables from the analytical lab, including raw data and chromatograms, to EPA.
49. Page 14, Section 7.0, Field Blanks. Clarify that one field blank per field event will be collected per type of equipment being used/decontaminated.
50. Table QAPP-2. The extraction time for SVOCs in water samples should be 7 days.
51. Tables QAPP-5, 6, and 7. Tables must be revised to also include comparison of analytical results against the potential ARARs and TBC materials identified in Comment No. 1.

- 52. Table QAPP-5. Revise to include aluminum, iron, and manganese.
- 53. Table QAPP-6. Revise to note the most recent CLP SOW - OLM04.3.

#### **Attachment C – Health and Safety Plan**

- 54. Page 6, Water Hazards. Revise to address entering the St. Joe River to collect sediment samples.
- 55. Page 6, Underground Utilities: Note that public utility locates are limited to the highway right-of-way (ROW), and may not be adequate for the area of the Site that is not in the public ROW.
- 56. Page 6, Remote Site: There is a minor typo here. Wallace and St. Maries are over one *hour* away, not one “mile” away.

#### **Attachment D - Biological Assessment Work Plan**

No comment.

#### **Attachment E – Cultural Resource Work Plan**

No comment.